



Figure 8.1 Adhesive bed for externally bonded CFRP laminate installation

The thickness of adhesive to be used should be specified by the laminate manufacturer. After adhesive application, the strip can be placed on the concrete substrate and pressed firmly to release entrapped air and change the dimension of the triangular adhesive cross section to a uniform thickness. Placement of clamping or shoring systems may be necessary in overhead applications for the duration of curing. After placement, the excess adhesive around the edges of the laminate should be wiped clean.

Externally Bonded Wet Lay-up CFRP Installation

All primers, putties and saturants should be mixed in the appropriate ratios with an electric mixer for the correct duration in ambient temperatures specified by the manufacturer. A primer coat is usually applied first to the concrete surface to penetrate open pores. Next, a bonding agent or putty is applied using a trowel to smooth the concrete surface and fill in small voids or gaps not adequately filled in during concrete repair and surface preparation. The putty is commonly made by mixing the primer/saturant with a thixotropic agent like untreated fumed silicon dioxide (Cabosil®). An approximate mixing ratio to the primer/saturant is 1:1 by volume.